Datasheet for ABIN2859232
IL-37 ELISA Kit

1	Image	2	Publications

Overview

Quantity:	96 tests
Target:	IL-37 (IL37)
Binding Specificity:	AA 46-218
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	15.6-1000 pg/mL
Minimum Detection Limit:	15.6 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human IL-37
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli
	Immunogen sequence: V46-D218
Specificity:	Expression system for standard: E.coli
	Immunogen sequence: V46-D218
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl

Target Details

Target:	IL-37 (IL37)
Alternative Name:	IL37 (IL37 Products)
Background:	Protein Function: Suppressor of innate inflammatory and immune responses involved in curbing excessive inflammation. This function requires SMAD3. Suppresses, or reduces, proinflammatory cytokine production, including IL1A and IL6, as well as CCL12, CSF1, CSF2, CXCL13, IL1B, IL23A and IL1RN, but spares anti-inflammatory cytokines. Inhibits dendritic cell activation. .
	Background: Interleukin 37(IL-37) also named IL1F7, is a protein that in humans is encoded by the IL1F7 gene. The protein encoded by this gene is a member of the interleukin 1 cytokine family. And it is mapped to 2q13. In vitro expression analysis showed that IL-37 was a secretory protein. And IL-37 could play an important role in the link between innate and adaptive immunity and may be useful for tumor immunotherapy. Meanwhile, IL-37 inhibits the production of inflammatory cytokines in peripheral blood mononuclear cells of patients with systemic lupus erythematosus. In addition, IL-37 can emerged as a dual-function cytokine with intra- and extracellular properties for suppressing innate inflammation. Furthermore, IL-37 is a new anti-inflammatory cytokine that plays an important role in protecting against tissue injury during infections via limiting immune and inflammatory reactions.
	Synonyms: Interleukin-37,FIL1 zeta,IL-1X,Interleukin-1 family member 7,IL-1F7,Interleukin-1 homolog 4,IL-1H,IL-1H4,Interleukin-1 zeta,IL-1 zeta,Interleukin-1-related protein,IL-1RP1,Interleukin-23,IL-37,IL37,FIL1Z, IL1F7, IL1H4, IL1RP1,
	Full Gene Name: Interleukin-37
	Cellular Localisation: Cytoplasm, cytosol. Nucleus. Secreted. Stimulation with IL1B leads to colocalization with SMAD3 mostly in perinuclear regions. Only the CASP1-cleaved mature form translocates into the nucleus upon LPS stimulation.
Gene ID:	27178
UniProt:	Q9NZH6

Application Details

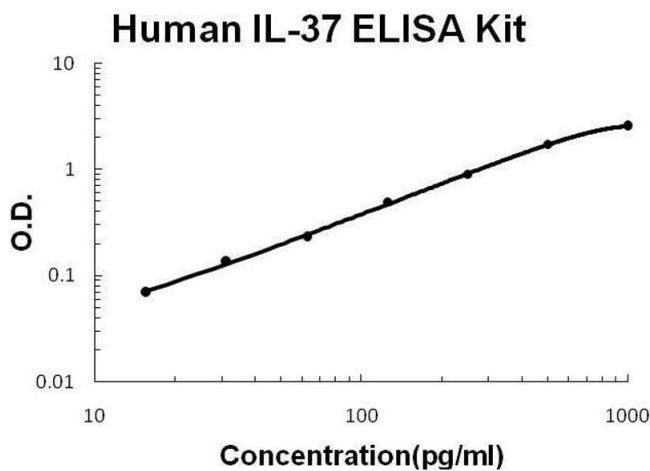|	
Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	Sequence similarities: Belongs to the IL-1 family. Tissue Specificity: In general, low constitutive expression, if any, in healthy tissues, high expression in inflammatory counterparts, including in synovial tissues from individuals with active rheumatoid arthritis. Isoform A, isoform B and isoform C are expressed in testis, colon, placenta, lung and lymph node. Isoform D and isoform E were found only in testis and bone marrow. Whereas only isoform A is found in brain, only isoform B in kidney and only isoform C in heart. .
Plate:	Pre-coated
Protocol:	human IL-37 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for IL-37 has been precoated onto 96-well plates. Standards(E.coli, V46-D218) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-37 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human IL-37 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.3pg/mL, 15.6pg/mL human IL-37 standard solutions into the pre-coated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each human IL-37 standard solution and each sample is measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 37.7, Standard deviation: 1.39, CV(%): 3.7 • Sample 2: n=16, Mean(pg/ml): 118, Standard deviation: 5.43, CV(%): 4.6 • Sample 3: n=16, Mean(pg/ml): 621, Standard deviation: 32.91, CV(%): 5.3, • Sample 1: n=24, Mean(pg/ml): 216, Standard deviation: 12.3, CV(%): 5.7 • Sample 2: n=24, Mean(pg/ml): 365, Standard deviation: 15.33, CV(%): 4.2 • Sample 3: n=24, Mean(pg/ml): 610, Standard deviation: 39.04, CV(%): 6.4
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in:	DAngelo, Reale, Costantini, Di Nicola, Porfilio, de Andrés, Fernández-Paredes, Sánchez-Ramón, Pasquali: "Profiling of Canonical and Non-Traditional Cytokine Levels in Interferon-β-Treated Relapsing-Remitting-Multiple Sclerosis Patients." in: **Frontiers in immunology**, Vol. 9, pp. 1240, (2018) (PubMed).
	Yu, Lu, Li, Xiao, Xing, Li, Wu: "Role of S100A1 in hypoxia-induced inflammatory response in cardiomyocytes via TLR4/ROS/NF-?B pathway." in: **The Journal of pharmacy and pharmacology**, Vol. 67, Issue 9, pp. 1240-50, (2015) (PubMed).

Images

ELISA

Image 1. Human IL-37/IL1F7 PicoKine ELISA Kit standard curve